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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,351	09/11/2003	Mark Michel	EN-57 (100241-22)	5121

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EXAMINER

RODRIGUEZ, PAMELA

ART UNIT	PAPER NUMBER
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3683

DATE MAILED: 09/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/660,351

Applicant(s)

MICHEL ET AL.

Examiner

Pam Rodriguez

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: on page 9 "slots 10" should read –slots 10A—to be consistent with the drawings, on page 9 line 12 element "40" should read –40A--, on page 19 line 1 element numeral "149" should read –149A--, and on page 19 line 20 element numeral "144" should read –154--.

Appropriate correction is required.

Claim Objections

2. Claim 22 is objected to because of the following informalities: the dependency of the claim should be from Claim 22 instead of Claim 20. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-10, 13-20, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the drive motor" in line 18. There is insufficient antecedent basis for this limitation in the claim.

In the last line of Claim 9, the phrase "and coupling the drive member to the drive shaft" appears to be a duplicate recitation of that same phrase in the previous line of the claim.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 2, 4-8, 11-17, and 20-22 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,427,811 to Wedge et al.

Regarding Claim 1, Wedge et al disclose an electrically operable brake drive (see Figure 1) for a vehicle having wheels, having braking apparatus for applying a braking force to at least one of the wheels to thereby set a brake of the vehicle and for reducing the applied braking force to thereby release the brake of the vehicle and having a force transmitting means 18 for coupling the braking apparatus to the drive, said brake drive comprising: a plurality of drivingly coupled and rotatable gears 47, 48, 42, 61, 66, and 69, one of the gears 69 including coupling means 58 for coupling one of the gears 69 to the force transmitting means 18 for setting and releasing the brake depending on the direction of rotation of said one of the gears 69; an electrically

operable motor 50 with a rotatable and reversible drive member 48 coupled to a gear 47 of the plurality of gears and alternatively rotatable in a first direction for rotating the gears in the brake setting direction and in a second, opposite direction for rotating the gears in the brake releasing direction (see column 4 lines 1-6); a detent mechanism 81/75 coupled to the gears for preventing rotation of the gears in the brake release direction when the drive member 48 is rotated in the first direction and for permitting rotation of the gears in the release direction when the drive member 48 is rotated in the second direction (see column 4 lines 51 et al); and an electrical control system 74 for controlling the direction of rotation of the drive member 48 for setting and releasing the brake without manual readjustment of the drive (see the abstract).

Regarding Claim 2, Wedge et al further disclose the plurality of gears comprising a drive gear 42 coupled to the one gear 69 for rotating the one gear and a rotatable drive shaft 59 coupled to, and rotatable by, the electric motor drive member 48 and coupled to the drive gear 42 for rotating the drive gear 42 and wherein the detent mechanism 81/75 is coupled to said drive shaft 59 by a drive shaft rotation direction dependent coupler 53 which permits the one gear 69 to rotate in the brake setting direction and prevents rotation of the one gear 69 in the brake release direction when the drive shaft 59 and the one gear 69 are rotated in the brake setting direction but which permits the one gear 69 to rotate in the brake release direction when the drive shaft 59 is rotated in the brake release direction (see column 4 lines 28 et al).

Regarding Claim 4, Wedge et al disclose that the electric motor drive member 48 is coupled to the drive shaft 59 by a releasable coupling 65 which, when actuated, uncouples the drive member 48 from the drive shaft 59 (see column 4 lines 56 et al).

Regarding Claim 5, Wedge et al that the releasable coupling 65 is manually releasable (at least via levers 14 or 16).

Regarding Claim 6, Wedge et al disclose a manually operable drive member 14/16 coupled to the drive shaft 59 for manually rotating the drive shaft for manually setting and releasing the brake.

Regarding Claim 7, Wedge et al disclose that the manually operable drive member 14/16 is coupled to the drive shaft 59 by a releasable coupling 66.

Regarding Claim 8, Wedge et al disclose that the releasable coupling 66 for coupling the drive shaft is manually releasable (at least via levers 14 and 16).

Regarding Claim 11, see Claim 1 above and further note said brake drive comprising the plurality of drivingly coupled and rotatable gears outlined in Claim 1 above, one of the gears 69 including coupling means 58 for coupling one of the gears 69 to the force transmitting means 18 for setting and releasing the brake depending on the direction of rotation of said one of the gears; a bi-directional, electrically operable motor 50 with a drive member 48 coupled to a second one of the gears 47 for rotating said one of the gears 69 in either the brake setting or brake releasing direction; a uni-directional detent mechanism 81/75, and a rotation direction dependent coupler 53/66 for coupling a rotatable gear 42 of the plurality of gears to the detent mechanism for permitting rotation of the rotatable gear 42 in the brake setting direction and preventing

rotation of the rotatable gear 42 in the brake release direction when the drive member rotates the second one of the gears 47 in the brake setting direction but permitting rotation of the rotatable gear 42 in the brake release direction when the electric motor 50 rotates the second one of the gears 47 in the brake release direction (see column 4 lines 28 et al).

Regarding Claim 12, Wedge et al disclose that the detent mechanism comprises 81/75: a ratchet gear 81 for rotation in a first direction when the rotatable gear 42 is rotated in the brake setting direction; a pawl 75 engaging the ratchet gear 81 and preventing rotation of the ratchet gear 81 in a second, opposite direction and wherein the rotation dependent coupler 53/66 comprises: a releasable coupling 66 interconnecting the ratchet gear 81 and the rotatable gear 42 for rotation together when the rotatable gear 42 is rotated in the brake setting direction and disconnecting the ratchet gear 81 and the rotatable gear 42 when the drive member 48 rotates the second one of the gears 47 in the brake release direction (see column 4 lines 56 et al).

Regarding Claim 13, Wedge et al disclose that the electrically operable motor 50 includes the drive member 48 and the drive member direction of rotation depends upon the electrical energization of the motor 50 and the electrical control system 74 controls the energization of the motor.

Regarding Claim 14, Wedge et al disclose that the electrical control system 74 comprises electronic components for supplying electrical energy to the motor causing the drive member 48 to rotate in a first direction or in a second direction.

Regarding Claim 15, Wedge et al disclose that the electronic components are controllable by manually operable switches 22 and 24.

Regarding Claim 16, Wedge et al disclose that the electronic control system 74 further comprises a limit switch 85 or 86 coupled to the electronic components and operable when the brakes are at least substantially released to stop the electrically operable motor 50, the limit switch 85 or 86 being operable by the coupling means 53 (see column 4 lines 56 et al).

Regarding Claim 17, Wedge et al disclose that the current drawn by the electrically operable motor 50 is dependent upon the rotation driving force supplied by the motor and wherein the electronic control system 74 further comprises a source of electrical energy coupled to the motor for energizing the motor, a comparator circuit for determining when the current reaches a predetermined value, the comparator being coupled to the motor electrical source and to the electronic components for stopping the motor when the current reaches the predetermined value (see column 6 lines 8-25).

Regarding Claim 20, Wedge et al disclose that the electrical control system 74 comprises a receiver for receiving the electromagnetic signals transmitted in free space and the received signals control the direction of rotation of the drive member (see column 7 lines 35-52).

Regarding Claim 21, see Claim 1.

Regarding Claim 22, see Claim 12.

Allowable Subject Matter

7. Claims 3, 9, 10, 18, and 19 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Fox et al., Pfingst, and Sauvage all disclose brake drives having both manually operated and electrically operated actuation mechanisms.

Klasing discloses a hand brake railway mechanism similar to applicant's.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pam Rodriguez whose telephone number is 703-308-3657. The examiner can normally be reached on Mondays 6 am -4 pm and Tuesdays 6 am -12 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Lavinder can be reached on 703-308-3421. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Pam Rodriguez
Primary Examiner
Art Unit 3683
9/13/04

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